REMARKS

This is in response to the Office Action of August 23, 2007. A clarifying amendment is made to the specification. No new subject matter is introduced by this Amendment. Claims 1-14 remain pending in the application.

Claims 1, 6, and 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 6,826,902 B2 to Sun et al. ("Sun") in view of US 6,105,365 to Deeba et al. ("Deeba"). Office Action, pages 2-5. Claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sun in view of US 2004/0261397 A1 to Yang ("Yang"). Office Action, pages 5-6. Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sun in view of Yang and "applicant's admitted prior art". Office Action, pages 6-7. Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sun in view of Deeba and Yang. Office Action, pages 7-8. Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sun in view of Deeba and "applicant's admitted prior art". Office Action, pages 8-9. Each of these rejections is respectfully traversed.

As indicated by the Examiner, Deeba relates to the same general technical concept as the present invention, i.e., an estimation approach of NOx occlusion amount, since Deeba calculates an actual purification rate (η) of the NOx catalyst based on a ratio of an actual NOx concentration (EONOx) at an inlet of the NOx catalyst and an actual NOx concentration (TOPNx) at an outlet of the NOx catalyst.

However, as amended in the previous Amendment, the presently claimed invention is characterized by comprising the step of "correcting each coefficient of said polynomial sequentially to become said estimated NOx purification rate calculated by said polynomial equal to the latest actual NOx purification rate calculated by said actual NOx purification rate calculating means." This step is neither taught nor suggested by Deeba nor by any of the other references cited by the Examiner.

At the top of page 3 of the Office Action, <u>the Examiner fails to address this feature of Applicants' invention</u>. Instead, the Examiner addresses the corresponding feature "correcting each coefficient of said polynomial sequentially on the basis of NOx purification rates

actually measured." The feature addressed by the Examiner in the outstanding Office Action was replaced by an Amendment filed on July 5, 2007. Applicants also filed a Request for Continued Examination, on August 6, 2007, to obtain the Examiner's consideration of the claims as amended. If the Examiner persists in the present rejection, it should be on the basis of the claims currently in the application, rather than on a previous version of Applicants' claims. Passage of this application to Issue, or issuance of a non-final rejection based upon the claims currently in this application in which an RCE has already been filed, are respectfully solicited.
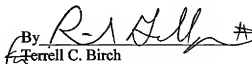
In any case, the present invention is not only novel but is also unobvious. The present invention does not simply employ a coefficient based on experimental data or a desorption rate of NOx measured. Instead, this invention improves the precision of estimating NOx occlusion amount by consistently renewing each coefficient of the polynomial. Nothing in the prior art cited by the Examiner suggests this approach.

In view of the above Remarks, Applicants believe that the present application is in condition for allowance, which action is earnestly solicited.

If there are any questions, please contact Richard Gallagher (Registration No. 28,781) at (703) 205-8008.

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By _R-1 H.M._ # 28,781

Terrell C. Birch
    Registration No.: 19,382
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorneys for Applicant